

REMARKS

The above amendments and following remarks are responsive to the points raised in the March 31, 2003 non-final Office Action. Upon entry of the above amendments, Claims 1-3, 5-9, and 11-14 will have been amended to formal matters and Claim 41 will have been canceled. Claims 1-14 will be pending. No new matter has been introduced. Entry and reconsideration are respectfully requested.

Response to the Objection of the Specification

The specification has been objected to on the basis that the title is not descriptive. A new title “that is clearly indicative of the invention to which the claims are directed” has been required.

Applicant has amended the title of the invention in accordance with the title suggested by the Examiner. As such, Applicant respectfully submits that the above amendment to the title obviates the Examiner’s objection. Accordingly, the objection is now moot and should be withdrawn.

Response to the Rejection under 35 U.S.C. § 112, second paragraph

Claim 41 has been rejected under 35 U.S.C. § 112, second paragraph, on the basis that Claim 41 lacks sufficient antecedent basis for the language of “said image sensing apparatus”. The Examiner also indicated that Claim 41 was erroneously not identified as being a part of Group II in the Restriction Requirement mailed January 14, 2003. On February 13, 2003, Applicant elected the Invention of Group I, Claims 1-14, and canceled non-elected Claims 15-40.

By virtue of the present Amendment, Applicant has canceled Claim 41. On this basis, the rejection of under 35 U.S.C. § 112, second paragraph, is now moot and should be withdrawn.

Response to the Rejection under 35 U.S.C. § 103(a)

Claims 1-14 have been rejected under 35 U.S.C. § 103(a) as being obvious over Oshima et al. ((Oshima) US Patent 5,526,045) in view of Hwang (US Patent 6,122,004). Applicant respectfully traverses this rejection.

The Examiner has admitted that the primary reference of Oshima does not teach each feature of the invention as recited in Claims 1-14. Specifically, the Examiner, in his comments rejecting Claims 1 and 3, states that:

“Oshima et al does not teach the use of a delaying step of delaying the read image signal by a predetermined time; [a]n adding step of adding the read image signal to the delayed image signal, delayed in the delaying step, at a predetermined addition ratio based on the calculation result of the calculating step; and an addition control step of prohibiting addition of the adding step when sensing a still image.”

The Examiner, however, attempts to rely on the secondary teaching of Hwang to remedy the admitted deficiencies of Oshima by stating that:

“Hwang teaches in Figure 6 and on Column 4, Lines 44-66, the use of a delaying step of delaying the read image signal by [a] predetermined time (66 and 63). An adding step (65) of adding the read image signal to the delayed image signal, delayed in the delaying step, at a predetermined addition ratio based on the calculation result of the calculating step. An addition control step of prohibiting addition of the adding step when sensing a still image. The delay step for delaying the read image signal by a predetermined time is performed by the first buffer and the image shifting means. The image adding means adds the delayed read image signal output by the shifting means (63) with the read image signal output by the second buffer (64). The predetermined adding ratio changes in that the amount of image in the second buffer (64) added to the delayed image

is proportional to how much shift was imposed on the image shifting means (63) controlled by the motion detector. Furthermore, it is inherent that if the image was a still image no shifting would take place in the image shifting means (63) and therefore, no portion of the image in the second buffer (64) would be added to the delayed image.”

The Examiner adds, with respect to Hwang in specific regard to Claim 3, that “[t]herefore the adding ratio would be 1:0 and would not be performed.”

In view of the above comments, the Examiner concludes that:

“[t]herefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the camera of Oshima et al so that the output image signals from the image sensor can be processed by the image signal correction circuit of Hwang to enable the camera of Hwang to better process both still and motion video.”

In regard to independent Claims 5, 8, 11, and 13, the Examiner urges that Claim 1 is substantively equivalent to Claims 5 and 11 and Claim 3 is substantively equivalent to Claims 8 and 13. Thus, Claims 5 and 11 have been rejected for reasons related to Claim 1 and Claims 8 and 13 have been rejected for reasons related to Claim 3. As such, Applicant’s comments regarding Claims 1 and 3 are likewise applicable to Claims 5, 8, 11, and 13.

Contrary to the Examiner’s above comments and conclusion of obviousness, Applicant respectfully submits that the Oshima or Hwang, either alone or in combination, teach, suggest, or render obvious the invention as recited in Applicant’s Claims 1-14. The Examiner’s reliance on the secondary teaching of Hwang and, in particular, Figure 6 and Column 4, lines 44-66, of Hwang is without foundation.

Hwang, at Column 4, lines 44-66 discloses that:

“FIG. 6 is a block diagram of the image stabilizing circuit according to the first embodiment of the invention. As shown in FIG. 6, the image stabilizing circuit comprises a CCD 61, a first buffer 66, a

motion detector 62, an image shifting means 63, a second buffer 64 and an image adding means 65. The CCD 61 receives light signals from objects, and produces image signals corresponding to the light signals. The first buffer 66 temporarily stores the image signals for shifting the image signal. The motion detector 62 is provided for analyzing the input image signals to detect the trembling motion of the input image signals. The image shifting means 63 shifts a frame of the image signals stored in the first buffer 66 according to an output of the motion detector 62, and thereby produces a shifted frame comprising a shifted portion of the image and a remaining portion with no image. The second buffer 64 is provided for storing the previous image signals output from the first buffer 66. Finally, the image adding means 65 is provided for adding the shifted portion of the image and a portion of the previous image stored in the second buffer, wherein the portion stored in the second buffer corresponds to the remaining portion of the shifted frame, and for producing the output images.”

Here, Hwang discloses that the image stabilizing circuit, shown in Figure 6, produces input image signals, via CCD 61, which are temporarily stored in the first buffer 66. The second buffer 64 stores previous image signals outputted by the first buffer 66. Motion detector 62 detects the trembling motion of the input image signals, the output of which is utilized by the image shift means for producing a shifted frame, i.e., a shifted portion of the image and a portion with no image. The shifted portion of the image is then added to a portion of the image stored in the second buffer 64 by the image adding means 65. However, nowhere here does Hwang disclose or suggest that the image stabilizing circuit, as suggested by the Examiner, performs a delaying step of delaying an input image signal by a predetermined time, an adding step of adding the input image signal to the delayed image signal at any predetermined addition ratio including 1:0 in a moving image recording mode, and an addition control step of prohibiting addition of an adding step in a still image recording mode.)

The Examiner's further statement, in regard to Hwang, that:

"it is inherent that if the image was a still image no shifting would take place in the image shifting means (63) and therefore, no portion of the image in the second buffer (64) would be added to the delayed image"

is without foundation. The Examiner is mere speculating, in light of Applicant's own disclosure, as to how the image stabilizing circuit of Hwang might possibly function "if the image was a still image". Hwang, however, does not provide any specific teaching regarding the processing of still images that would remotely support the Examiner's inherency theory or render Applicant's recited invention as being obvious over Oshima in view of Hwang.

On the basis of the above discussion, Applicant respectfully submits that the subject matter of independent Claims 1 and 3, as well as independent Claims 5, 8, 11, and 13, are neither taught, suggested, nor otherwise rendered obvious over the prior art references of Oshima and Hwang, either alone or in combination. There is nothing in either Oshima or Hwang that would remotely teach or suggest to one of ordinary skill in the art that Oshima could obviously be modified in view of the secondary teaching of Hwang to arrive at Applicant's recited invention without the foreknowledge of Applicant's complete disclosure. As such, each of the independent Claims 1, 3, 5, 8, 11, and 13 are distinguished over the prior art of record. Dependent Claims 2, 4, 6, 7, 9, 10, 12, and 14 are likewise distinguished over the prior art of record. Accordingly, the rejection of Claims 1-14 under 35 U.S.C. § 103(a) should be withdrawn.

Response to the Objection of the Drawings

The drawings have been objected to on the basis that "Figures 1-10 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated." The Examiner has required that Figures 1-10 be corrected in response to the March 31, 2003 non-final Office Action.

Applicant has amended each of Figures 1-10, i.e., drawing sheets 1/22, 2/22, 3/22, 4/22, 5/22, 6/22, 7/22, 8/22, 9/22, and 10/22, to include the legend "PRIOR ART". As referred to above, the attached drawing sheets 1/22, 2/22, 3/22, 4/22, 5/22, 6/22, 7/22, 8/22, 9/22, and 10/22 replace original Figures 1-10. Accordingly, the objection to the drawings is now moot and should be withdrawn.

CONCLUSION

Applicant respectfully submits that Claims 1-14 are in condition for allowance and a notice to that effect is earnestly solicited.

AUTHORIZATIONS:

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1232-4511.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

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By: 

Brian W. Brown

Reg. No.: 47,265

(202) 857-7887 Telephone

(202) 857-7929 Facsimile

Correspondence Address:
Morgan & Finnegan
345 Park Avenue
New York, NY 10154
(212) 758-4800 Telephone
(212) 751-6849 Facsimile